

FLOW AND STRENGTH PROJECTIONS

MONTH: April 2022

	<u>PROJECTED</u>	<u>ACTUAL</u>	<u>DIFFERENCE</u>	<u>PROJECTED INCOME FOR MONTH</u>	<u>ACTUAL INCOME FOR MONTH</u>	<u>SURPLUS OR DEFICIT</u>
FLOW (GALLONS)	225,569,000	283,177,000	57,608,000	\$ 172,109.15	\$ 216,064.05	\$ 43,954.90
B.O.D. (#s)	417,237	504,259	87,022	\$ 80,526.74	\$ 97,322.04	\$ 16,795.30
S. SOLIDS (#s)	396,694	447,356	50,662	\$ 100,760.28	\$ 113,628.51	\$ 12,868.23
PHOSPHORUS (#s)	7,646	8,225	579	\$ 51,167.03	\$ 55,038.82	\$ 3,871.79
AMMONIA-N (#s)	50,436	51,025	589	\$ 62,893.69	\$ 63,628.18	\$ 734.48
CHLORIDES (#s)	950,770	1,192,032	241,262	\$ 3,803.08	\$ 4,768.13	\$ 965.05
			TOTAL:	\$ 471,259.97	\$ 550,449.73	\$ 79,189.76

(THRU APRIL 2022)

PROJECTED FOR 2022

	<u>END OF YEAR PROJECTED</u>	<u>YEAR TO DATE SURPLUS/ DEFICIT</u>	<u>YEAR TO DATE SURPLUS/ DEFICIT \$\$</u>
FLOW (GALLONS)	2,053,099,003	-50,197,000	\$ (38,300.31)
B.O.D. (#s)	3,755,281	171,918	\$ 33,180.16
S. SOLIDS (#s)	3,909,560	27,254	\$ 6,922.63
PHOSPHORUS (#s)	80,410	1,463	\$ 9,793.34
AMMONIA-N (#s)	505,265	12,830	\$ 15,998.84
CHLORIDES (#s)	8,748,079	272,320	\$ 1,089.28
		TOTAL:	\$ 28,683.93

RAW INFLUENT STRENGTH (Heart of the Valley Metropolitan Sewerage Facility)

April 2022

MONTH	FLOW		TSS			BOD			TOTAL PHOSPHORUS			AMMONIA			CHLORIDE		
	Million * Gallons	Avg MGD	Avg mg/L	Avg #/day	Total # /Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month
Jan	144.3	4.7	264	10,292	319,047	351	13,608	421,860	6.54	253	7,858	50.2	1947	60,352	722	28,567	857,010
Feb	129.3	4.6	267	10,291	288,149	375	14,417	403,684	6.64	256	7,158	46.7	1765	49,409	859	33,186	929,200
Mar	236.2	7.6	203	11,759	352,759	259	14,736	456,826	4.42	250	7,758	32.5	1795	55,652	716	41,706	1,292,877
Apr	272.3	9.1	147	10,865	325,941	184	13,580	407,390	3.28	240	7,200	24.5	1775	55,039	511	33,214	1,029,625
May																	
Jun																	
Jul																	
Aug																	
Sep																	
Oct																	
Nov																	
Dec																	
Average	196	6.5	220	10,802	321,474	292	14,085	422,440	5.22	250	7,493	38.5	1,821	55,113	702	34,168	1,027,178
Yearly Total	782.1				1,285,896			1,689,760			29,974			220,452			4,108,712
*Includes Hauled Waste																	
[Plant Design Capacity]																	
		8.5		13,565			12,209			339			1,600				
(Hauled Waste Gallons)= 222,160																	
[Max Design Capacity]																	
		11.9		16,278			14,651			407			1,920				
April % of Capacity																	
		76%		67%			93%			59%			92%				

April Max Daily Flow 14.53

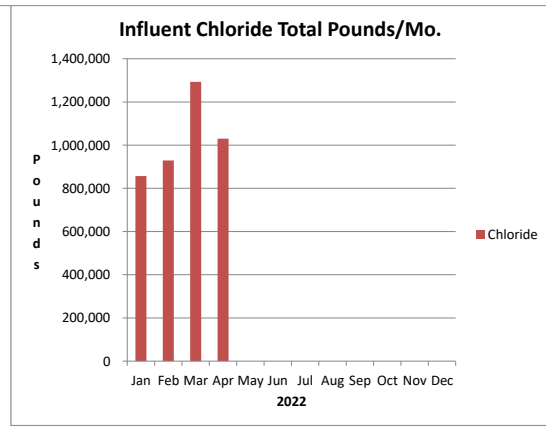
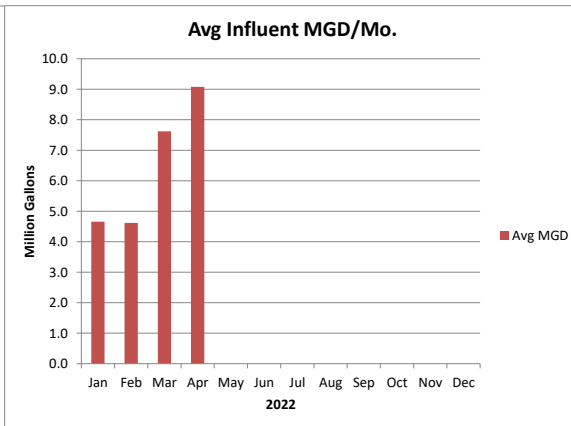
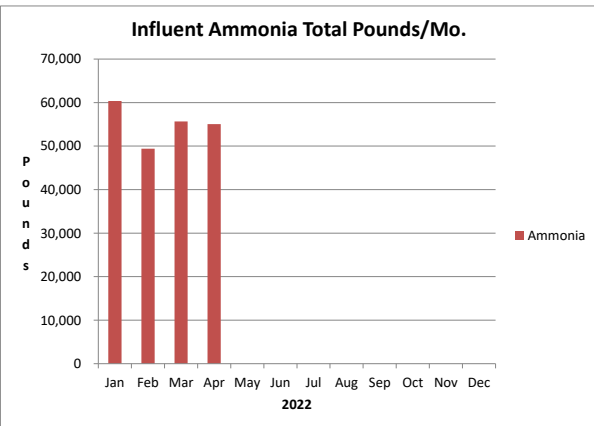
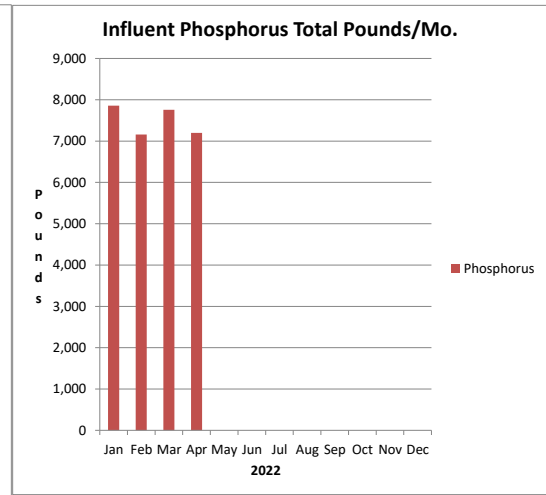
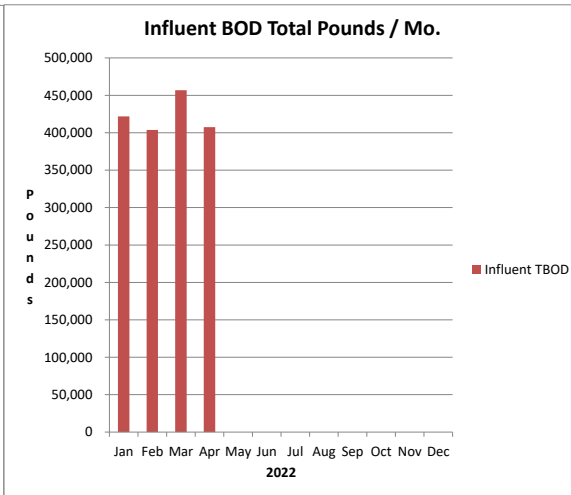
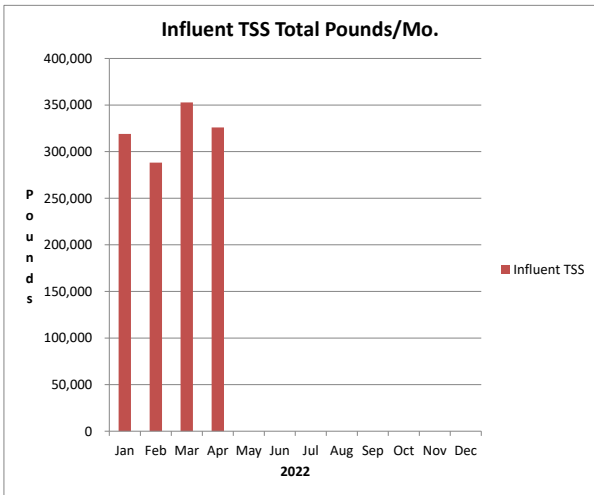
EFFLUENT QUALITY

MONTH	FLOW		TSS			BOD			TOTAL PHOSPHORUS			AMMONIA			CHLORIDE
	Million Gallons	Avg MGD	Avg mg/L	Avg #/day	Total # /Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L
Jan	61.6	2.0	12.8	212	6,561	10.5	173	5,364	0.34	5.6	173	0.46	8.0	249	746
Feb	63.2	2.3	13.3	249	6,976	11.3	211	5,918	0.33	6.3	177	0.49	9.1	254	829
Mar	151.3	4.9	21.0	1,122	33,655	15.1	746	23,115	0.37	17.9	554	0.49	20.4	571	699
Apr	189.3	6.3	19.2	629	18,878	10.9	586	17,593	0.21	11.8	353	0.83	42.5	1,190	520
May															
Jun															
Jul															
Aug															
Sep															
Oct															
Nov															
Dec															
Average	116.3	3.9	16.6	553	16,518	12.0	429.1	12,997	0.31	10.4	314.5	0.57	20.0	566.0	699
Yearly Total	465.4				66,071			51,990			1,258			2,263.8	

{PERMIT LIMITS (WDNR) →	Monthly (Avg)	801#	Monthly Avg	30 mg/L	Monthly Avg	31.5#	Monthly Avg Limit	Jan- Marc	10 mg/L
	Weekly (Avg)	1345#	Weekly Avg	45 mg/L	6 mo Avg	10.5#		April-May	11 mg/L
	Daily Max (mg/L)	30	WLA May-Oct		Daily Max mg/L	1.0		June-Sept	4.4 mg/L
								Oct- Dec	18 mg/L

Effluent Gallons to Fox Energy	82.99	% to Fox Energy	35%
(April)			
WEEK 1	1143		
WEEK 2	461		
WEEK 3	693		
WEEK 4	272		

April	Avg #'s	6 mo. Avg #'s	9.66	Nov-April
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RAIN GAUGES

DAILY RAINFALL TOTALS

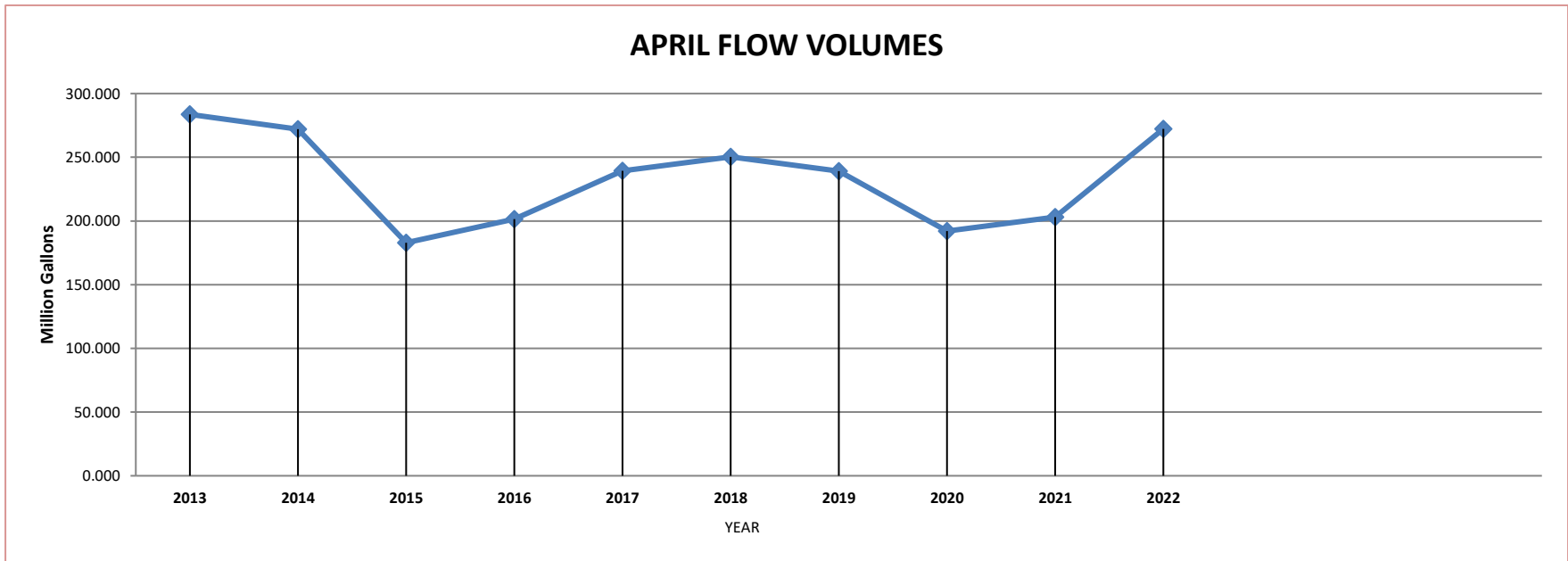
MONTH: APRIL

YEAR: 2022

<u>DATE</u>	<u>PLANT INCHES</u>	<u>KAUKAUNA INCHES</u>	<u>LITTLE CHUTE INCHES</u>	<u>KIMBERLY INCHES</u>	<u>DARBOY INCHES</u>
1	0.05				
2	0.11				
3	0.16				
4	0.08				
5	0.52				
6	0.06				
7	0.15				
8	0.04				
9	0.00				
10	0.00				
11	0.00				
12	0.26				
13	0.72				
14	0.00				
15	0.00				
16	0.00				
17	0.08				
18	0.09				
19	0.00				
20	0.36				
21	0.00				
22	0.16				
23	0.03				
24	0.00				
25	0.00				
26	0.00				
27	0.00				
28	0.00				
29	0.00				
30	0.00				
TOTAL:	2.87	0.00	0.00	0.00	0.00

HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

<u>Year</u>	<u>April Flow Million Gallons</u>	<u>Precipitation Inches</u>
2013	283.615	3.19
2014	272.038	4.08
2015	182.911	1.91
2016	201.541	0.89
2017	239.329	3.44
2018	250.232	1.02
2019	239.147	2.33
2020	192.15	1.21
2021	202.92	1.53
2022	272.294	2.87



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

% CONTRIBUTION BY COMMUNITY - FLOW GALLONS

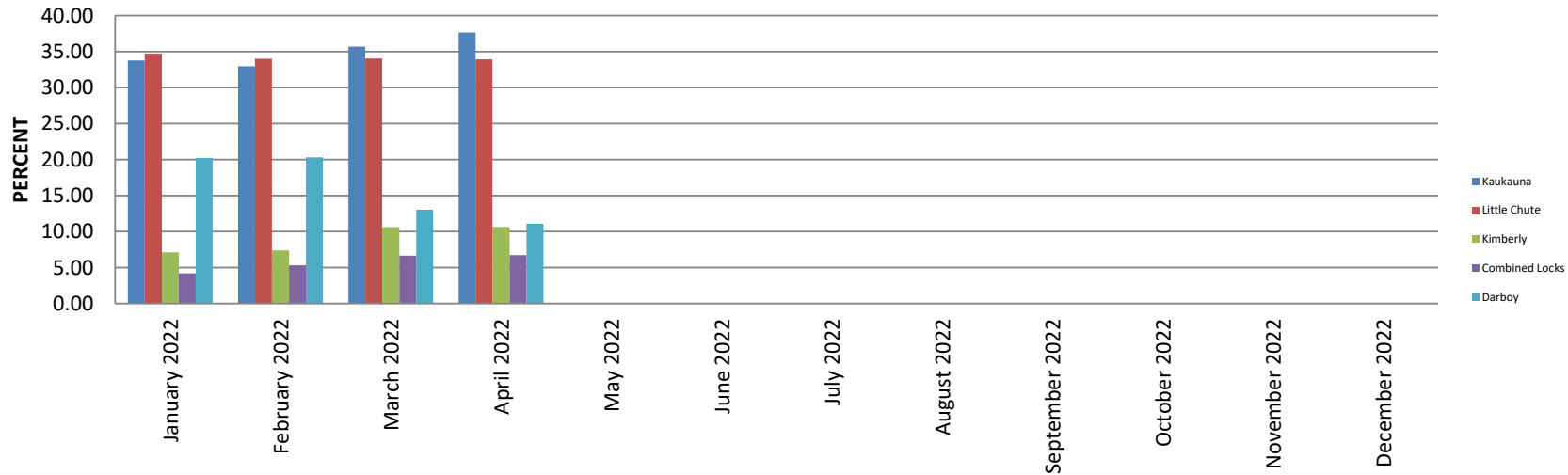
	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>	<u>Rainfall - Inches*</u>
January 2022	33.76	34.71	7.12	4.19	20.22	0.28
February 2022	32.97	34.01	7.39	5.30	20.32	0.50
March 2022	35.69	34.04	10.60	6.66	13.02	5.46
April 2022	37.67	33.91	10.65	6.71	11.06	2.87
May 2022						
June 2022						
July 2022						
August 2022						
September 2022						
October 2022						
November 2022						
December 2022						

* Nov-March=Rain,Melted Snow, Etc (in.)

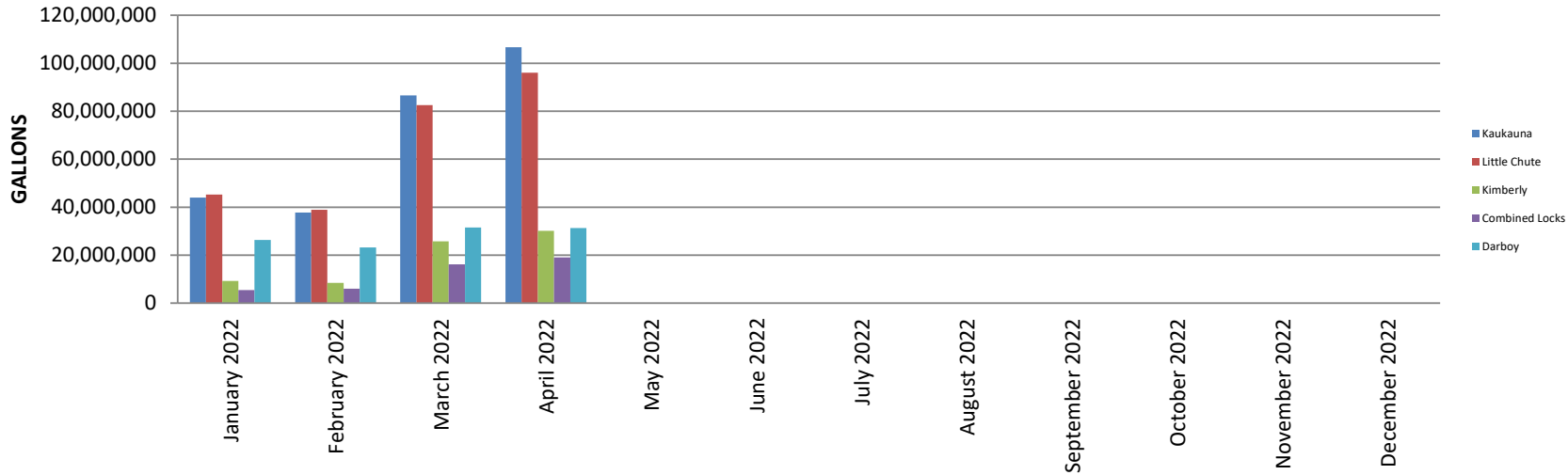
GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	44,006,000	45,240,000	9,281,000	5,463,000	26,358,000
February 2022	37,739,000	38,925,000	8,463,000	6,063,000	23,260,000
March 2022	86,547,000	82,539,000	25,708,000	16,146,000	31,571,000
April 2022	106,667,000	96,022,000	30,170,000	19,012,000	31,306,000
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY - FLOW GALLONS



GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

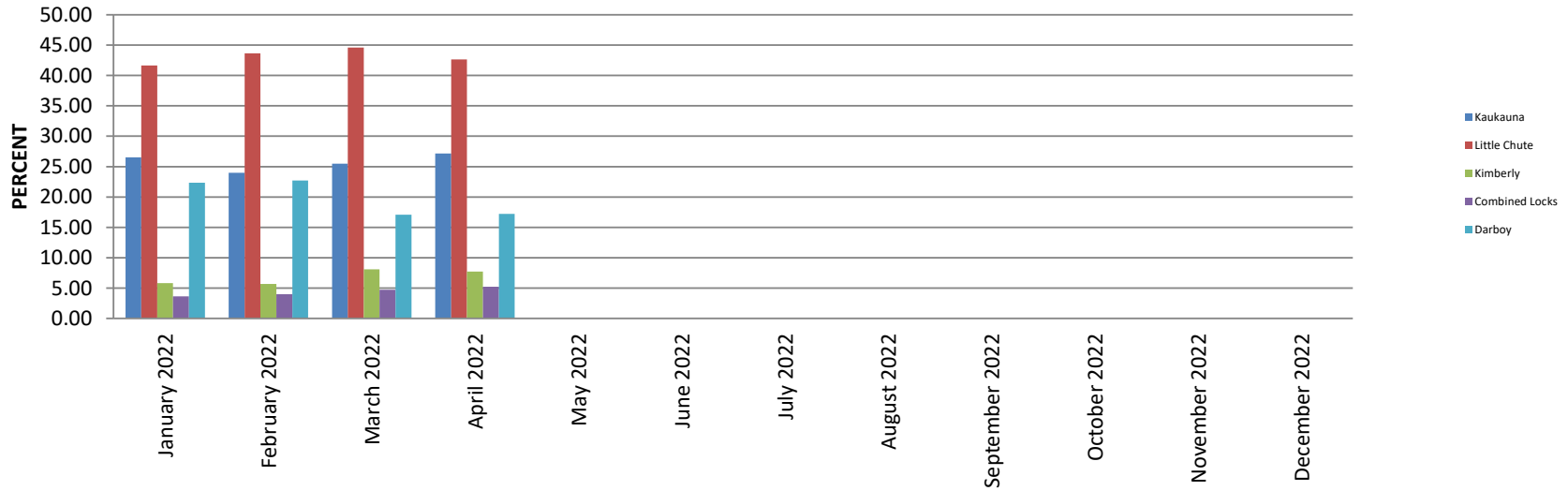
% CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	26.54	41.67	5.82	3.61	22.35
February 2022	23.98	43.65	5.68	3.99	22.71
March 2022	25.47	44.62	8.09	4.73	17.09
April 2022	27.17	42.65	7.72	5.24	17.21
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

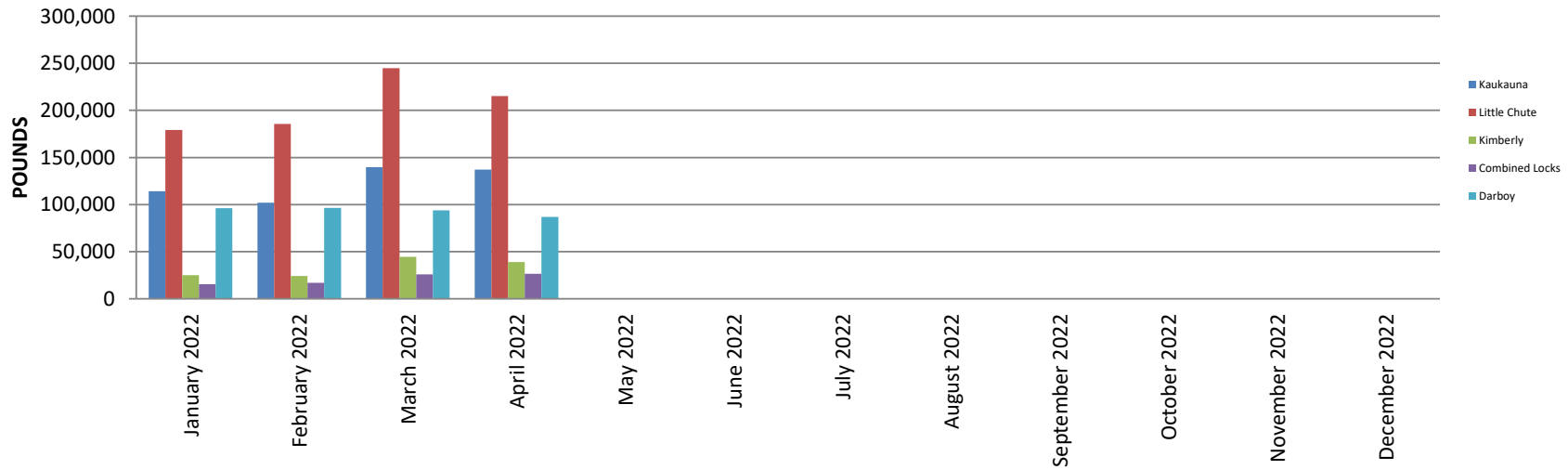
POUNDS CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	114,049	179,088	25,032	15,529	96,075
February 2022	101,875	185,458	24,145	16,935	96,501
March 2022	139,657	244,645	44,368	25,938	93,728
April 2022	137,018	215,081	38,942	26,422	86,797
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

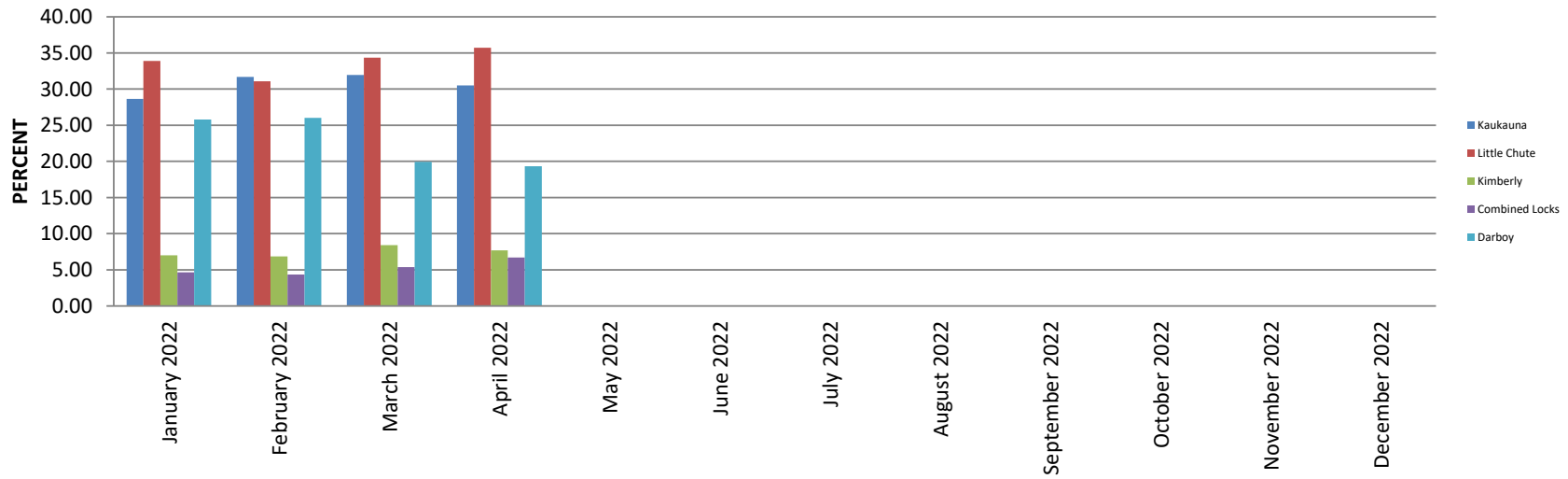
% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	28.65	33.89	7.00	4.65	25.81
February 2022	31.68	31.07	6.85	4.36	26.04
March 2022	31.96	34.35	8.40	5.36	19.94
April 2022	30.53	35.73	7.68	6.71	19.35
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

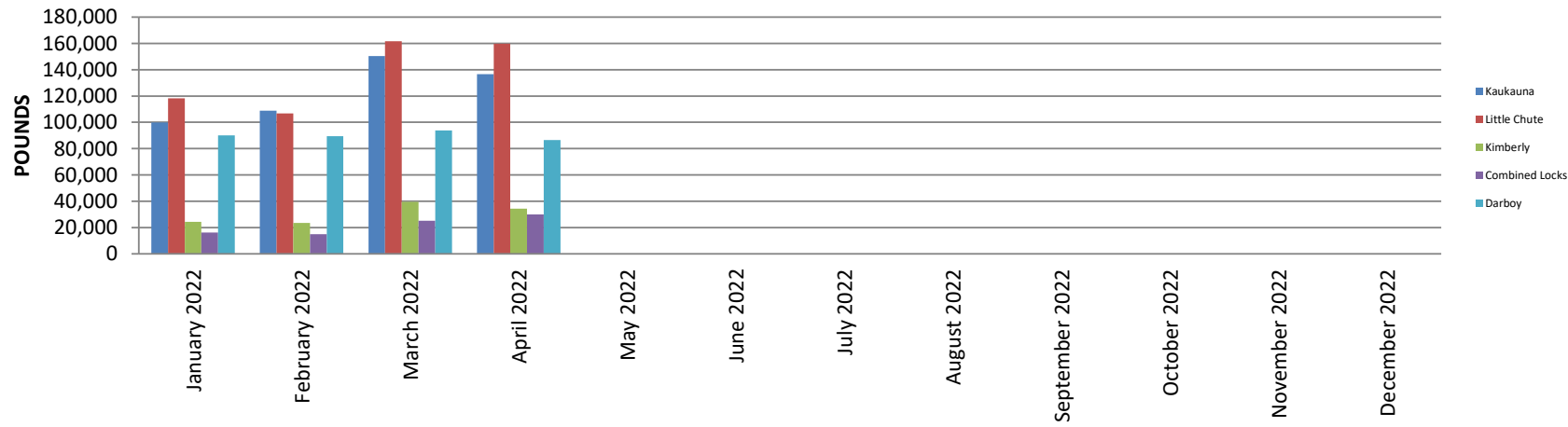
POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	99,881	118,168	24,409	16,212	90,008
February 2022	108,904	106,811	23,566	15,004	89,520
March 2022	150,309	161,575	39,497	25,190	93,802
April 2022	136,587	159,842	34,368	30,012	86,546
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

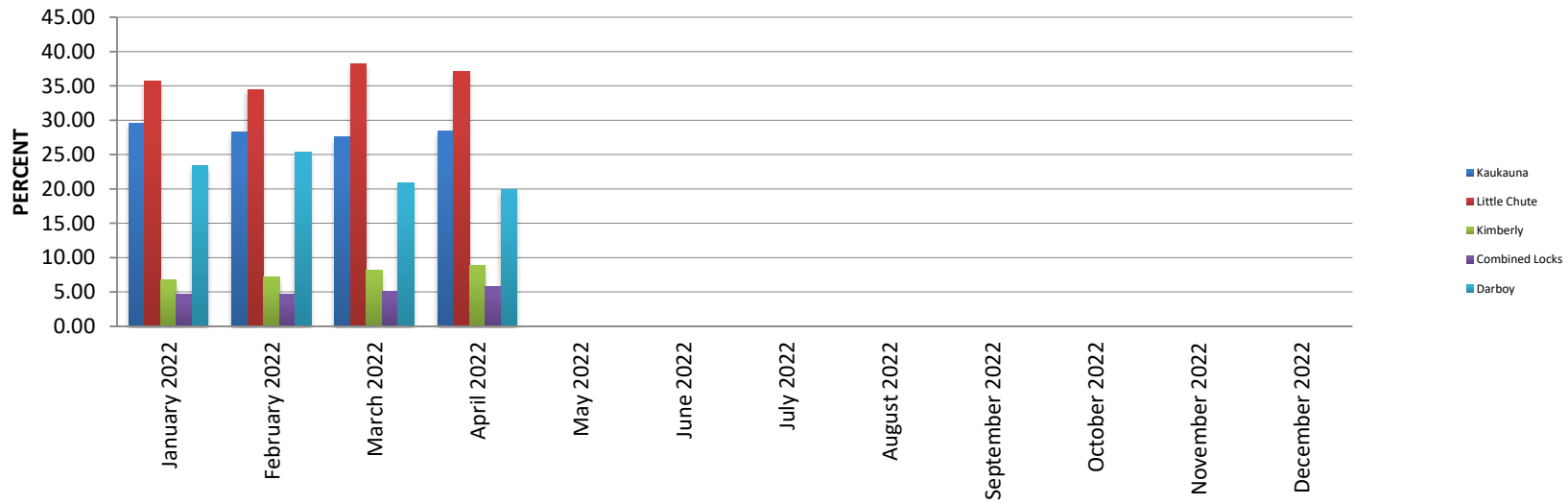
% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	29.58	35.66	6.70	4.62	23.44
February 2022	28.25	34.51	7.19	4.68	25.37
March 2022	27.53	38.18	8.23	5.13	20.93
April 2022	28.42	37.06	8.93	5.74	19.85
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

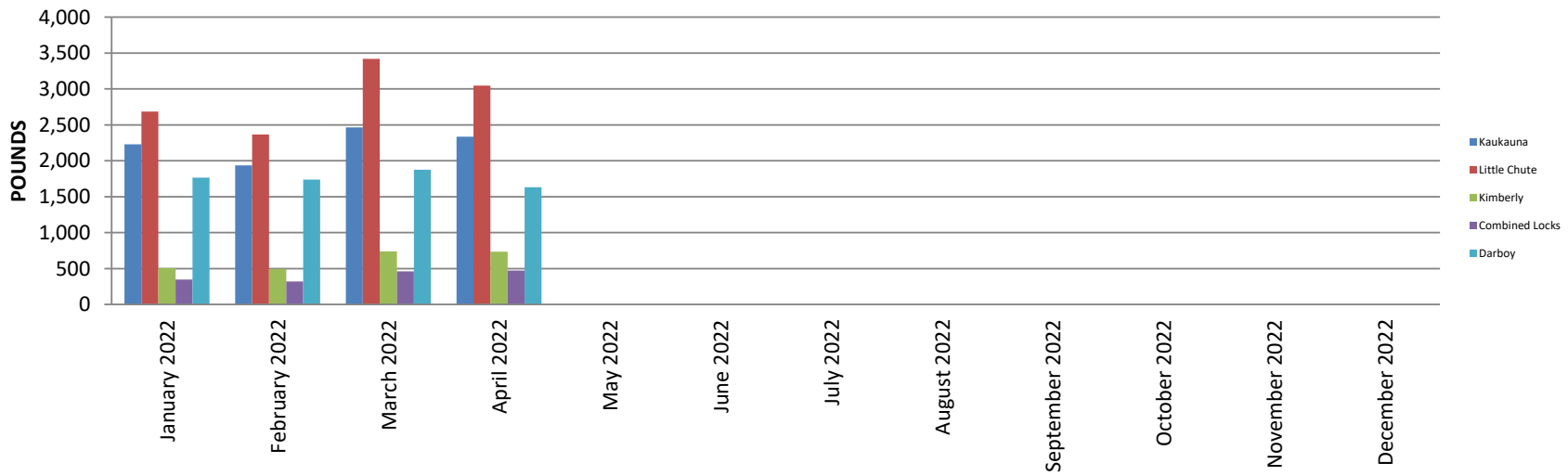
POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	2,229	2,686	505	348	1,766
February 2022	1,935	2,364	493	320	1,737
March 2022	2,465	3,419	737	459	1,875
April 2022	2,337	3,048	735	472	1,632
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

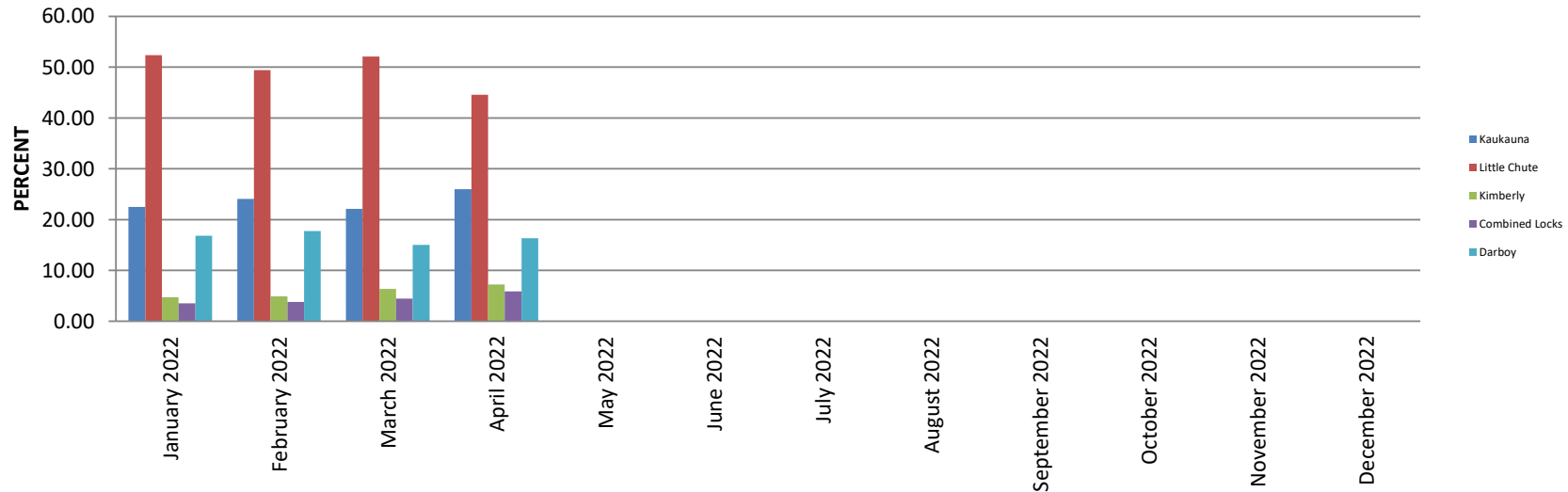
% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	22.50	52.38	4.72	3.55	16.85
February 2022	24.08	49.43	4.90	3.82	17.77
March 2022	22.09	52.08	6.38	4.43	15.03
April 2022	26.00	44.56	7.26	5.85	16.34
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

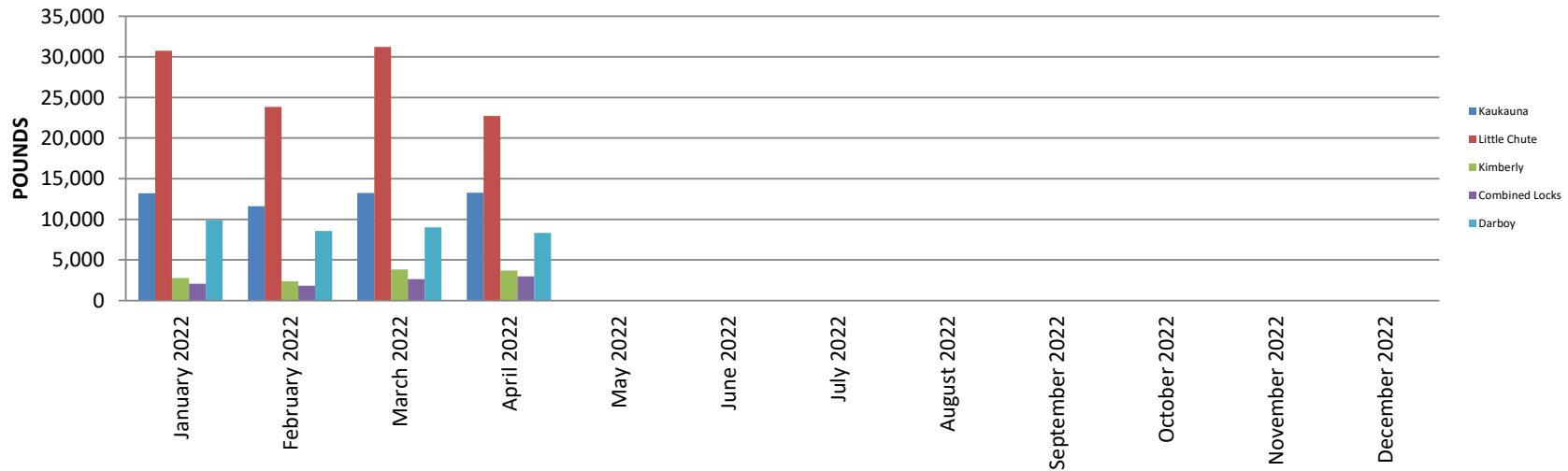
POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	13,213	30,761	2,773	2,083	9,895
February 2022	11,612	23,841	2,363	1,842	8,570
March 2022	13,236	31,211	3,826	2,653	9,006
April 2022	13,266	22,735	3,705	2,983	8,336
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

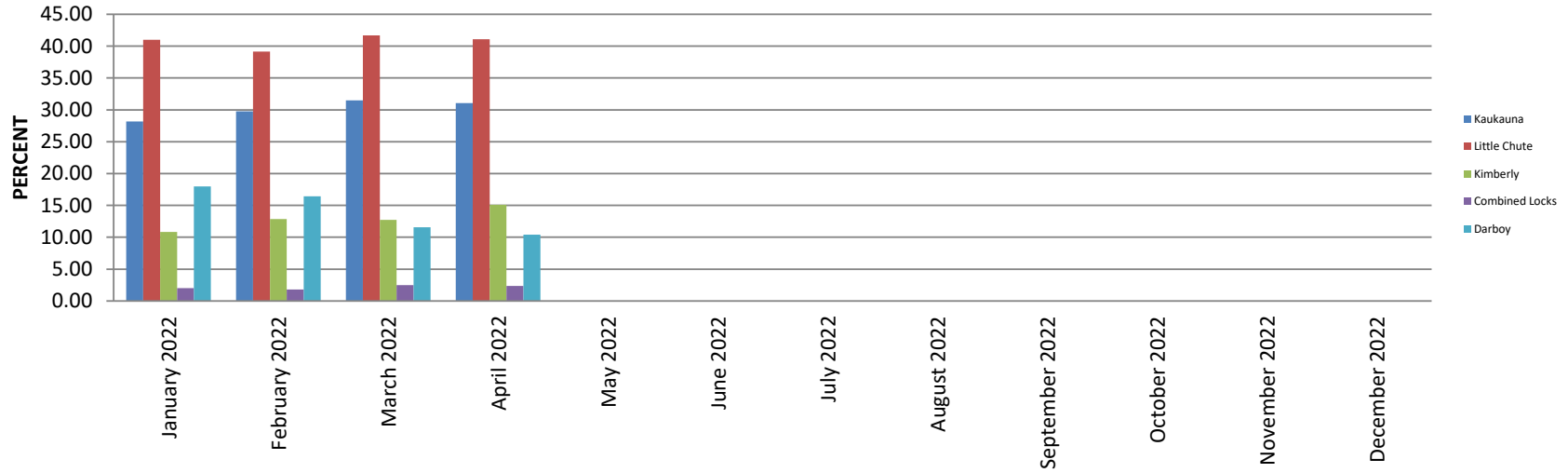
% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	28.19	40.98	10.85	2.00	17.98
February 2022	29.77	39.14	12.86	1.82	16.42
March 2022	31.49	41.70	12.75	2.49	11.57
April 2022	31.04	41.08	15.10	2.38	10.40
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

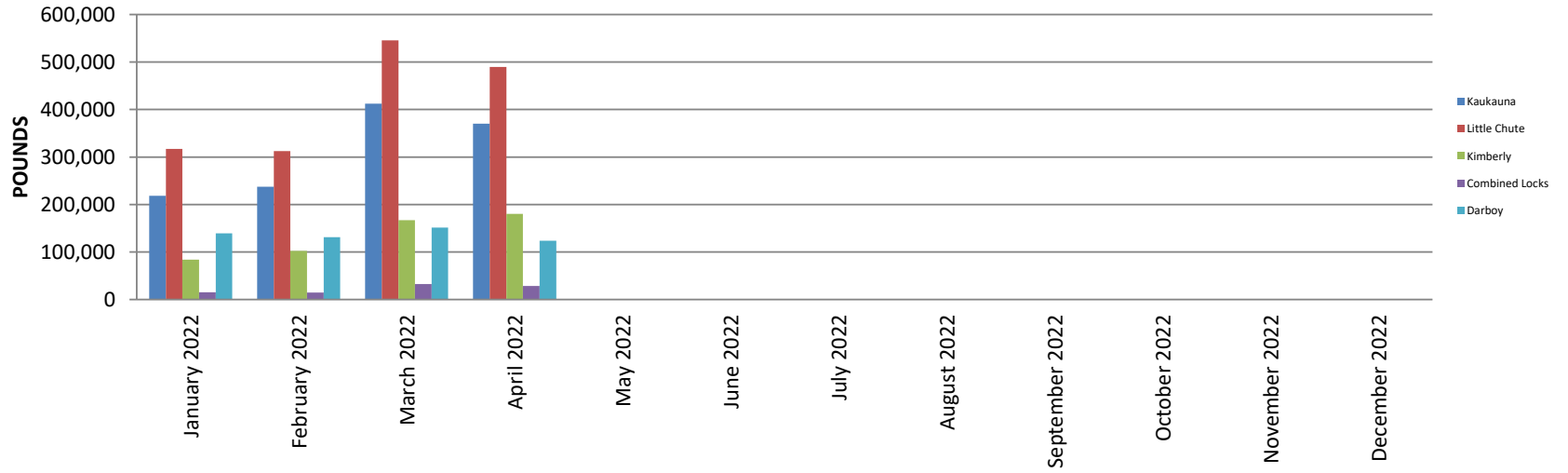
POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	218,136	317,040	83,950	15,473	139,137
February 2022	237,466	312,154	102,539	14,529	130,931
March 2022	412,002	545,722	166,848	32,583	151,392
April 2022	370,037	489,639	180,041	28,374	123,942
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

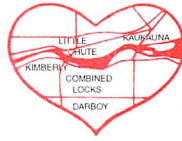


POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS



DISTRICT DIRECTOR:

Brian M. Helminger

**COMMISSIONERS:**

David J. Casper, President
 Bruce M. Siebers, Vice-Pres.
 Patrick E. Hennessey, Secretary
 Kevin P. Coffey
 John W. Sundelius

SERVING:

Combined Locks
 Kaukauna
 Kimberly
 Little Chute
 Darboy S.D.

Heart of the Valley
METROPOLITAN SEWERAGE DISTRICT

801 THILMANY ROAD
 KAUKAUNA, WISCONSIN 54130
 (920) 766-5731 FAX (920) 766-5733
 www.hvmsd.org

Facility: Wisconsin Public Service Corporation - Fox Energy Center
 P.O. Box 5651
 Bismarck, ND 58506

Attn: Account # N2310E

Month: April

Year: 2022

Gallons of Final Effluent Purchased (Billing)

<u>Date</u>	<u>Gallons</u>	<u>Date</u>	<u>Gallons</u>
4/1/2022	2,911,000	4/21/2022	3,084,000
4/2/2022	2,851,000	4/22/2022	2,649,000
4/3/2022	2,505,000	4/23/2022	2,722,000
4/4/2022	3,086,000	4/24/2022	2,357,000
4/5/2022	2,821,000	4/25/2022	2,535,000
4/6/2022	2,544,000	4/26/2022	2,764,000
4/7/2022	2,364,000	4/27/2022	2,371,000
4/8/2022	2,853,000	4/28/2022	3,083,000
4/9/2022	2,935,000	4/29/2022	2,635,000
4/10/2022	2,559,000	4/30/2022	2,859,000
4/11/2022	2,895,000		
4/12/2022	2,661,000		
4/13/2022	3,263,000		
4/14/2022	2,545,000		
4/15/2022	2,755,000		
4/16/2022	2,869,000		
4/17/2022	2,074,000		
4/18/2022	3,480,000		
4/19/2022	2,990,000		
4/20/2022	2,965,000		
		Total:	82,985,000

Facility: Wisconsin Public Service Corporation - Fox Energy Center
P.O. Box 5651
Bismarck, ND 58506

Attn: Account # N2310E

MONTHLY BILLING

Month: April

Year: 2022

GALLONS PURCHASED: 82,985,000

BILLING RATE: \$0.1635645 PER 1000 GALLONS

TOTAL AMOUNT DUE: \$13,573.40

**Heart of the Valley
Metropolitan Sewerage District**

**Fox Energy Revenue
From the Sale of Final Effluent**

2022

Final Effluent Sent to Fox Energy Facility

Gallons: 316,751,000

Charge Per 1000 Gallons: \$0.1635645 Per 1000 Gallons

Sale of Final Effluent (Revenue Collected): \$51,809.22